

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A method for assaying N samples, wherein N is greater than or equal to 2, said samples each containing a single compound to be tested, said method comprising:

- a) providing N populations of carrier beads wherein the carrier beads of each population comprise a detectable label for distinguishing the carrier beads of each population from the carrier beads of every other population,
and
a reactant bound thereto,

wherein said reactant comprises a first component of a specific binding pair, and

said reactant being the same for said carrier beads in all of said N populations;

- b) dispensing one distinguishable population of said N populations of carrier beads into a separate, corresponding one of N different reaction vessels, so that said one of N different reaction vessels contains one of said N populations, and
performing said dispensing for each population of said N populations;

- c) dispensing one of said N samples having a single compound to be tested, into a separate, corresponding one of said N different reaction vessels, so that said one of N different reaction vessels contains one of said N samples and one of said N populations, and
performing said dispensing for each sample of said N samples;
- d) providing in a fluid medium, in each of said N different reaction vessels, reagents for performing a binding assay and wherein said reagents are the same for all said N different reaction vessels, one of said reagents being a second component of said binding pair and wherein said second component carries a signal moiety, under conditions such that a portion of the amount of said second component carrying said signal moiety is caused to be bound to said first component during said assay, in each one of said N different reaction vessels; and
- e) combining the contents of said N different reaction vessels to form a mixture, and
- f) analyzing the mixture by flow cytometry
wherein
 - i) measurement of said signal moiety indicates at least one of the following:
presence or absence of said compound to be tested, concentration of said compound to be tested, and biological activity of said compound to be tested;
and

- ii) measurement of said detectable label indicates the sample containing said compound to be tested.

Claim 2 (cancelled)

Claim 3 (previously presented): The method of claim 1, wherein N is 80 – 100,000.

Claim 4 (cancelled)

Claim 5 (previously presented): The method of claim 1, wherein N is from 80 to 4000.

Claim 6 (currently amended): The method of claim 1, wherein said reactant ~~or reagent~~, bound to said carrier beads is pre-coated on said carrier beads.

Claim 7 (previously presented): The method of claim 1, wherein said detectable label comprises at least one fluorescent dye.

Claim 8 (previously presented): The method of claim 1, wherein said detectable label comprises an electronic label.

Claim 9 (previously presented): The method of claim 1, wherein said signal moiety is a fluorescent dye.

Claims 10-11 (cancelled)

Claim 12 (currently amended): A method for assaying N samples, wherein N is greater than or equal to 2, said samples each containing a single compound to be tested, said method comprising:

- a) providing N populations of carrier beads wherein the carrier beads of each population comprise a detectable label for distinguishing the carrier beads of each population from the carrier beads of every other population, and a reagent bound thereto, said reagent being the same for said carrier beads in all of said N populations;
- b) dispensing one distinguishable population of said N populations of carrier beads into a separate, corresponding one of N different reaction vessels, so that said one of N different reaction vessels contains one of said N populations, and performing said dispensing for each population of said N populations;
- c) dispensing one of said N samples having a single compound to be tested, into a separate, corresponding one of said N different reaction vessels so that said one of N different reaction vessels contains one of said N samples and one of said N populations, and performing said dispensing for each sample of said N samples;

- d) combining in a fluid medium, in each of said N different reaction vessels additional reagents for performing an assay wherein said additional reagents are the same for all said N reaction vessels, and wherein one of said additional reagents or said reagent bound to said carrier bead carries a signal moiety, under conditions such that a portion of said signal moiety is caused to be partitioned between said carrier beads and said fluid medium during said assay, in each one of said N different reaction vessels;
 - e) combining the contents of said N different reaction vessels to form a mixture, and
 - f) analyzing the mixture by flow cytometry;
- wherein
- i) measurement of said signal moiety indicates at least one of the following: presence or absence of said compound to be tested, concentration of said compound to be tested, and biological activity of said compound to be tested; and
 - ii) measurement of said detectable label indicates the sample containing said compound to be tested.

Claim 13 (previously presented): The method of claim 12, wherein N is 80 – 100,000.

Claim 14 (previously presented): The method of claim 12, wherein N is from 80 to 4000.

Claim 15 (currently amended): The method of claim 12, wherein said ~~reactant or reagent~~, bound to said carrier beads is pre-coated on said carrier beads.

Claim 16 (previously presented): The method of claim 12, wherein said detectable label comprises at least one fluorescent dye.

Claim 17 (previously presented): The method of claim 12, wherein said detectable label comprises an electronic label.

Claim 18 (previously presented): The method of claim 12, wherein said signal moiety is a fluorescent dye.